UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/843,452	04/26/2001	Michael J. Narayan	MFCP.81824	8292

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EXAMINER
CHANKONG, DOHM

ART UNIT	PAPER NUMBER
2152	

DATE MAILED: 08/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 July 2005*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8, 11, 12 and 19-26* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8, 11, 12 and 19-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1>   This action is in response to Applicant's amendment and remarks. Claims 19-26 have

been added. Claims 1-8, 11, 12 and 14-26 are presented for further examination.

2>   This is a non-final rejection.

Continued Examination Under 37 CFR 1.114

3>   A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant

to 37 CFR 1.114. Applicant's submission filed on 7.18.2005 has been entered.

Response to Arguments

4>   Applicant's arguments with respect to claims 1-26 have been considered but are moot

in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5>   Claims 1-7 and 19-22 are rejected under 35 U.S.C § 103(a) as being unpatentable over

Badovinatz et al, U.S Patent No. 5.793.962 ["Badovinatz"], in view of Harriman et al, U.S

Patent No. 6.226.687 ["Harriman"].

6>   As to claim 1, Badovinatz discloses a method for use in a computer system, operating

in a peer-to-peer environment having a host peer and at least one non-host peer, and for

ordering operation requests of the peers, the operation requests being one of a provided list of

recognized operations which may be requested, comprising:

receiving, by the host peer, a first operation request from the provided list [column 1

«line 58» to column 2 «line 4» where : Badovinatz's group leader corresponds to a host peer,

and operations such as join and leave correspond to list of recognized operations. Badovinatz

does not explicitly disclose a peer system but his group cluster is interpreted as Examiner as

comparable to a peer environment];

subsequently receiving, by the host peer, a second operation request from the provided

list [t].

Badovinatz does not explicitly disclose the host peer assigning a first unique version

number to the first operation request or a second unique version number to the second

operation request, the second unique version number indicating a later receipt time than the

first unique version number, such that the host peer evaluates relative arrival times of the

first operation request and the second operation request based on the first unique version

number and the second unique version number.

7>   It should be noted that Badovinatz discloses that the host peer utilizes a queue when

receiving multiple operations requests from other peers [column 11 «lines 11-25»]. To one of

ordinary skill in the art, a queue is essentially a structure that stores incoming|outgoing

messages in a sequential fashion, and in Badovinatz's system, the queue would store

incoming operations from other peers. This is further suggested by Badovinatz's use of the

sequence numbers for outgoing operations that enables a host peer to maintain message

consistency between all members within the cluster [column 8 «lines 23-30»]. In light of this,

Harriman is utilized to disclose assigning sequential numbers to received packets, storing the

packets in a work queue and, processing the packets based on the order of the sequential

numbers [Figure 1 | column 2 «line 64» to column 3 «line 7»]. Harriman's disclosure keeps in

line with Badovinatz's use of sequence numbers for outgoing messages and would further

enhance the Badovinatz's host peer's ability to handle and process multiple operations from

its peers. Therefore, this combination corresponds to Applicant's claimed host peer assigning

version numbers to operation requests, and evaluating the relative arrival times of the first

and second operation requests based on the unique version numbers. In Harriman, packets

that arrive first receive a lower sequence number and are placed in the queue in front of any

subsequent packets.

        It would have been obvious to one of ordinary skill in the art to incorporate the

functionality of sequence numbers into Badovinatz's message queue. Harriman teaches that

the use of the sequence numbers enables a system to check if the next packet (message) in

the queue is the proper packet to be processed. Such functionality is well known in the art

and is beneficial for providing a layer of fault tolerance in Badovinatz's messaging system.

8>   As to claim 2, Badovinatz discloses processing the operation requests in the order

received in the queue [column 11 «lines 11-25»] but does not disclose processing in order of the

assigned version number.

9>   Harriman discloses processing packets from a queue in the order of assigned version

number [Figure 1 | column 2 «lines 64» to column 3 «line 7»]. As mentioned previously, it

would have been obvious to one of ordinary skill in the art to incorporate the functionality of

sequence numbers into Badovinatz's message queue. Harriman teaches that the use of the

sequence numbers enables a system to check if the next packet (message) in the queue is the

proper packet to be processed. Such functionality is well known in the art and is beneficial

for providing a layer of fault tolerance in Badovinatz's messaging system.

10>   As to claim 3, Badovinatz discloses the method of claim 2, further comprising sending,

by the host peer, an operation order an assigned version number to each peer in the peer-to-

peer environment, the order and the version number being associated with the operation

request [column 6 «lines 43-60» | column 8 «lines 23-45» : the host peer informs the other

members when a new member has joined].

11>   As to claim 4, Badovinatz discloses the method of claim 3, further comprising

processing, by the receiving peer, the operation order in the order of the assigned version

number [column 8 «lines 23-30» | column 11 «lines 22-25»].

12>   As to claim 5, Badovinatz discloses the method of claim 1, wherein the operations are

name table operations [column 7 «lines 35-67»].

13>   As to claims 6 and 7 as they merely variations (computer readable medium and

system) on the implementation of the steps of the method of claim 1, they do not teach or

further define over the claimed limitations. Therefore, these claims are similarly rejected for

reasons set forth for claim 1.

14>   As to claim 19, Badovinatz discloses the method of claim 1, further comprising

assigning, by the host peer, a third unique version number to each non-host peer in the peer-

to-peer environment, the third unique version number indicating when each non-host peer

joined a session [column 12 «lines 51-56» : "provider identifier" can be used by members to

determine the time when other members have joined the group, the group corresponding to

Applicant's claimed "session"].

15>   As to claims 20 and 21, as they do not teach or further define over the previously

claimed limitations, they are similarly rejected for reasons set forth for claim 19, supra.

16>   As to claim 20, Badovinatz discloses the method of claim 1, wherein the provided list

of recognized operations includes at least one of creating a player, destroying a player,

creating a group, destroying a group, adding a player to a group, removing a player from a

group, updating a player's data, and updating a group's data [column 6 «lines 43-60» | column 7 «lines 35-67» where : Badovinatz's members correspond to players].

17>   Claims 8, 11, 12 and 23-26 are rejected under 35 U.S.C § 103(a) as being unpatentable over Badovinatz, in view of Miller, U.S Patent Publication No. 2002|0073153.

18>   As to claim 8, Badovinatz discloses a method for use in a computer system, operating in a peer-to-peer environment having a host peer and at least one non-host peer, and for requesting operations of the host peer, the operations being one of a provided list of recognized operations which may be requested, comprising:

        sending, by the non-host peer, at least one operation request from the provided list to the host peer [column 7 «lines 35-67» : for example, the insert and leave requests];

        receiving, by the non-host peer, an operation order and an assigned unique version number associated with the operation request [column 7 «lines 41-46 and 59-65» | column 8 «lines 23-30»]

        Badovinatz discloses determining whether the assigned version number received is the next in a sequence of version numbers processed by the receiving non-host peer [column 8 «lines 23-30»] but does not explicitly disclose queuing the operation order until the version number is next in the sequence of version numbers processed by the receiving peer if the next version number is not the next in a sequence. Badovinatz also does not explicitly disclose processing, by the receiving peer, the operation order in the order of the assigned version number.

19>   In a related invention, Miller is directed towards sharing group data amongst

members within a group during membership change operations [0005]. Miller discloses

utilizing an ordered messaging scheme so that members sees messages sent by other

members in the same way as every other member, ensuring synchronization between the

members and that every member maintains a queue through which all messages pass [0005,

0042, 0056]. Therefore, it should be clear that the ordered messages enable members to

process the received messages in the same order as other members in the group and the queue

structure helps Miller's system achieve this goal.

As Badovinatz discloses using sequence numbers for the same purpose as Miller, it

would have been obvious to one of ordinary skill in the art to modify Badovinatz by

incorporating Miller's queue structure and to process operations in order of the assigned

sequence number in all members to enable synchronization between members [see Miller

0005].

20>   As to claims 11 and 12 as they merely variations (computer readable medium and

system) on the implementation of the steps of the method of claim 8, they do not teach or

further define over the claimed limitations. Therefore, these claims are similarly rejected for

reasons set forth for claim 8.

21>   As to claim 23, Badovinatz discloses the method of claim 8, further comprising

receiving, by the non-host peer, another assigned version number, the another assigned

unique version number indicating when the non-host peer joined a session [column 12 «lines 51-56» : "provider identifier"].

22>   As to claim 24, Badovinatz discloses the method of claim 8, wherein the provided list of recognized operations includes at least one of creating a player, destroying a player, creating a group, destroying a group, adding a player to a group, removing a player from a group, updating a player's data, and updating a group's data [column 6 «lines 43-60» | column 7 «lines 35-67» where : Badovinatz's members correspond to players].

23>   As to claims 25 and 26, as they do not teach or further define over the previously claimed limitations, they are similarly rejected for reasons set forth for claim 23, supra.
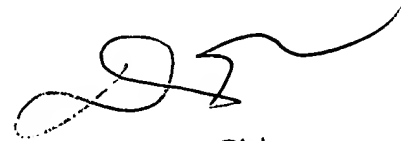
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is (571)272-3942. The examiner can normally be reached on 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571)272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

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for unpublished applications is available through Private PAIR only. For more information

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access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-

9197 (toll-free).

DC

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Primary Examiner